

COASTAL CONSERVANCY

Staff Recommendation
October 21, 2010

ORANGE COUNTY KELP RESTORATION PROJECT

File No. 08-164-01
Project Manager: Megan Cooper

RECOMMENDED ACTION: Authorization to disburse up to \$25,000 to Get Inspired! to conduct kelp restoration at selected locations in Orange County.

LOCATION: Locations near Laguna Beach, Orange County (Exhibit 1)

PROGRAM CATEGORY: Resource Enhancement

EXHIBITS

Exhibit 1: [Location Maps](#)

Exhibit 2: [Photos of Pre- and Post-restoration Sites](#)

Exhibit 3: [Project Letters](#)

RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31251-31270 of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes the disbursement of an amount not to exceed \$25,000 (twenty five thousand dollars) to Get Inspired! to conduct kelp restoration in Orange County. This authorization is subject to the condition that, prior to the disbursement of any funds, Get Inspired! shall submit for the review and written approval of the Conservancy’s Executive Officer a work program, budget, schedule, and the names of any contractors to be employed in carrying out the work.”

Staff further recommends that the Conservancy adopt the following findings:

“Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed project is consistent with Chapter 6 of Division 21 of the Public Resources Code (Sections 31251-31270) regarding enhancement of coastal resources.
2. The proposed project is consistent with the Project Selection Criteria and Guidelines.

3. Get Inspired! is a nonprofit organization existing under Section 501(c)(3) of the United States Internal Revenue Code and whose purposes are consistent with Division 21 of the Public Resources Code.”
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PROJECT SUMMARY:

Staff recommends that the Conservancy authorize disbursement of up to \$25,000 to Get Inspired! for the Orange County Kelp Restoration Project (“Project”). Through this project, Get Inspired will restore giant kelp, *Macrocystis pyrifera*, at depleted reef locations in Orange County, near Laguna Beach (Exhibit 1), that historically supported kelp forests.

With the proposed grant, Get Inspired! will restore kelp forest habitat structure to improve biodiversity in the area and will collect biological data about the near-shore marine habitat using Reef Check California protocol, which has been approved by the California Department of Fish and Game. The project will use volunteer scuba divers to plant kelp, relocate sea urchins, and gather important data on kelp forest habitats to support better management of existing and restored kelp forests.

Specifically, the project will include the following activities:

- Restore and monitor 8,000 square meters (2 acres) of giant kelp on reefs that historically supported kelp beds in Laguna Beach to increase diversity and species abundance of marine fishes;
- Recruit and train volunteer divers to participate in scientific data collection and hands-on kelp restoration techniques;
- Collect biological data at previously restored sites in Crystal Cove and Laguna Beach;
- Involve middle and high school students in kelp restoration through interactive learning activities including growing kelp in classrooms for outplanting.

Giant kelp forests are among the most productive and diverse ecosystems in the world, providing food and shelter for more than 800 species of marine animals including California’s threatened species such as bocaccio rockfish and giant black sea bass. Over the past century, many natural and human-induced pressures have caused a loss of nearly 80% of Southern California’s kelp forests, with almost 90% of Orange County’s kelp bed lost over the last 30 years. Some former kelp beds have become over-run with sea urchins. The sea urchins graze on the kelp and, because they have lost most of their natural predators, can eliminate an entire kelp forest through overgrazing. Images of urchin barrens in the proposed restoration area and post-restoration photos from a previously restored site are shown in Exhibit 2.

The project will be carried out by Get Inspired! and will be overseen by a Technical Advisory Committee consisting of kelp scientists from the Department of Fish and Game and various research institutions. Get Inspired! was founded in 2009 by marine biologist Nancy Caruso, who has been managing kelp restoration projects in Orange County since 2002 (see Project History). Get Inspired! is a nonprofit organization that was created to promote science education and community involvement through hands-on environmental projects.

Site Description: The project sites will be located on two reefs offshore of Laguna Beach in Orange County, as shown in Exhibit 1. These reefs historically supported kelp beds, but do not currently support healthy kelp populations.

In the northern hemisphere, giant kelp is only found along the Pacific coast of California and Baja California. Giant kelp creates dense forests and a canopy on the surface of the water, providing food and shelter for marine animals, including important commercial and recreational fishery species. Kelp beds are important nursery areas for many juvenile fishes. About 30% of the species and 40% of fish families in the southern California Bight occupy kelp beds for some portion of their lives. Marine scientists have documented that the abundance and distribution of kelp forests in the southern California Bight have declined by more than three-quarters since the 1960's.

Project History: Starting in 2001, the Santa Monica BayKeeper and California CoastKeeper Alliance have been jointly managing regional kelp restoration in the Santa Monica Bay, using a combination of funds from public, private, local, state and federal sources, and with substantial in-kind contributions from volunteers. In 2001, they were awarded a three-year NOAA Community-Based Habitat Restoration Program grant for three years of work. These federal funds were matched by Coastal Conservancy funds from Proposition 12. In this first project, 3,000 square meters of kelp forest were restored. Monitoring of the previous restoration sites has shown dramatic transformation of "urchin barrens," areas carpeted with urchins and no kelp, to mature and stable kelp beds. In 2004, the Conservancy provided an additional grant for a second project which restored 12,000 square meters of reef throughout Southern California. The proposed authorization would continue this successful work, focusing on a new project area in Laguna Beach, Orange County.

PROJECT FINANCING:

Norcross Wildlife Foundation	\$2,000
Laguna Oceans Foundation	\$4,500
Boeing Employees Fund	\$12,000
The Nature Conservancy	\$17,600
Coastal Conservancy	<u>\$25,000</u>
Total	\$61,100

The anticipated source of Conservancy funds will be the fiscal year 08/09 appropriation of the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 ("Proposition 84") for Conservancy state-wide resource protection projects. Consistent with the purposes of this funding source, this project will help restore the natural habitat values of coastal waters (Public Resources Code Section 75060). The proposed project is appropriate for prioritization under the criteria set forth in Public Resources Code Section 75071 because the project includes significant non-state matching funds.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION

This project will be undertaken pursuant to Chapter 6 of Division 21 of the Public Resources Code (Sections 31251-31270) regarding coastal resource enhancement projects. Consistent with Section 31251, the proposed authorization will award a grant to a nonprofit organization to enhance coastal resources that have become degraded due to natural and human-induced events. The proposed project will restore the natural character of the kelp forests by re-establishing sustainable populations of giant kelp. Giant kelp forests are important nursery areas for many juvenile fishes and an important habitat for many southern California fish species.

Section 31252 states that all areas proposed for resource enhancement shall be identified in a certified local coastal plan or program as requiring public action to resolve existing or potential resource protection problems. The proposed project is consistent with the City of Laguna Beach's Local Coastal Program, as described in the "Consistency with Local Coastal Plan" section, below.

Consistent with Section 31253, staff has determined the recommended amount of funding by evaluating the total amount of funding available to the Conservancy for coastal resource enhancement projects, the fiscal resources of the applicant, the urgency of the project relative to other eligible similar projects, and the application of other factors prescribed by the Conservancy for the purpose of determining project eligibility and priority. The Conservancy's funding is appropriate because the project's benefits to coastal habitat are significant, the Conservancy's contribution is one third of the total project costs, with two thirds of the funding coming from private sources, and the project's use of volunteers will provide added cost savings and an important public education component.

CONSISTENCY WITH CONSERVANCY'S 2007 STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):

Consistent with **Goal 5 Objective B**, the proposed project will help restore and enhance **8,000 square meters** of coastal habitat.

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA & GUIDELINES:

The proposed project is consistent with the Conservancy's Project Selection Criteria, last updated on June 4, 2009, and Guidelines in the following respects:

Required Criteria

1. **Promotion of the Conservancy's statutory programs and purposes:** See the "Consistency with Conservancy's Enabling Legislation" section above.
2. **Consistency with purposes of the funding source:** See the "Project Financing" section above.
3. **Support from the public:** The following are contributors and supporters of the Orange County Kelp Restoration Project: Reef Check California, California Department of Fish and

Game, California Department of Parks and Recreation, Crystal Cove State Park, City of Newport Beach, and City of Laguna Beach. Letters of support are attached as Exhibit 3.

4. **Location:** The project sites will be located offshore of Laguna Beach in Orange County, as shown in Exhibit 1.
5. **Need:** Although the grantee has assembled an impressive array of funding sources, the Conservancy's funding would fill a critical funding gap and would enable the grantee to begin implementation of the school program for 2010/2011.
6. **Greater-than-local interest:** The project will improve kelp forest habitat structure to maintain a high level of biodiversity, increase the public understanding of the natural environment to help protect and preserve natural resources, and will provide accurate and consistent near-shore data for the successful implementation of the Marine Life Management Act and Marine Life Protection Act.
7. **Sea level rise vulnerability:** This project is located in an area vulnerable to future sea level rise because it is a subtidal project. The Conservancy's climate change policy requires analysis of vulnerability based on a sea level rise of 16 inches by 2050 and 55 inches by 2100. Such a sea level rise would affect the growing depth and light availability for kelp. However, despite potential impacts to kelp resulting from sea level rise, restoring foundational species such as kelp could help make nearshore biological communities more resilient to climate change's impacts.

Additional Criteria

12. **Readiness:** The project has secured the required regulatory permit from the California Department of Fish and Game.
13. **Realization of prior Conservancy goals:** The Conservancy has been involved in restoration of kelp forests in southern California for the past seven years. This project will build on past success and expand the restoration to a new area in Orange County.
15. **Cooperation:** As described in the project financing section, Get Inspired! will involve a large array of collaborators to implement this project. Further, the project involves volunteers and students in the restoration work.
17. **Vulnerability from climate change impacts other than sea level rise:** Rising sea surface temperatures and an increase in violent storm events, possible impacts of climate change, could affect the function and distribution of the restored kelp forests. However, restoring the ecological function of the kelp forest communities now will increase their resistance and resilience to climate change in the future.

CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:

The proposed project is consistent with the City of Laguna Beach's General Plan/Local Coastal Plan (LCP), which was adopted by the Coastal Commission on January 13, 1993. The LCP, Open Space Element, Policy 2H, states that the City shall support the restoration of offshore kelp beds.

COMPLIANCE WITH CEQA:

The proposed project is categorically exempt from review under the California Environmental Quality Act (CEQA). Pursuant to 14 Cal. Code of Regulations Section 15301(h), projects involving maintenance of existing native growth are categorically exempt. Kelp restoration involves the planting of kelp onto bottom substrate areas that historically hosted kelp plants. No alteration of the nearshore benthic marine environment is involved in the project and no pesticides will be used. Staff will file a Notice of Exemption upon approval.